

Rascal Frontier & Pioneer Scooters

Owner's Manual & Service Record



Rascal Frontier



Rascal Pioneer





Rascal Frontier



Rascal Pioneer

Electric Mobility Euro Ltd has designed these powerful, durable, road-capable scooters for comfort during outdoor use. Provided that they are maintained and operated in accordance with this manual they should last for many years, and provide you with freedom and independence.

Please read this manual thoroughly before using your scooter. If you have any doubts about warnings or instructions, ask your dealer for an explanation.

If you think the scooter may be damaged, do not drive it but contact your dealer for advice.

We suggest that you keep this manual in a safe place. It contains essential information on the operation of the scooter and includes the maintenance records. If at any time you feel you may not be able to control the vehicle safely, do not drive, but consult your dealer for a solution.

Notice

All Electric Mobility Vehicles are sold through authorised dealers. Make sure your dealer demonstrates all the features of the product prior to, or when, it is delivered.



Warning!

This manual contains important safety notices. Please take time to read and understand them. Ignoring them may endanger you or others.

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Dealer Information

**This is your contact number
for service and support**

Dealer Stamp

Telephone:

Email:

Product Model Number

Serial Number

Date of Purchase

Owner

For product information see serial number plate on the seat post under the seat.

Manufacturer

**ELECTRIC
MOBILITY**

Electric Mobility Euro Limited

Canal Way, Ilminster, Somerset TA19 9DL

Company Registration in England No. 2419231

Features and Layout

The photo shows the Rascal Pioneer scooter. The Rascal Frontier is a very similar design. See Technical Specification Sheet for detail.



Safety Information



Read this manual thoroughly before driving or operating the vehicle.

This handbook is applicable for all Rascal Frontier and Pioneer Scooters.

If you have any doubt about the content of this manual phone your dealer to resolve the problem. Please read this manual, and ensure your scooter is serviced regularly.



Within this manual there are important safety notices. They are clearly marked with the sign (left) Make sure that you understand all these notices. If you have any doubt, contact your dealer.



Book symbol: This symbol appears on the product. Please read this product manual before assembling or operating the scooter.



Pinchpoint symbol: Wherever you see this sign there is a nearby risk of injury owing to a pinch or crushing point.



Tip symbol: This sign indicates advice on how to get the most from your scooter.

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Intended use of the vehicle

The Rascal Frontier and Pioneer scooters are designed for use by adults with a disability (up to the maximum recommended weight) who require a robust, comfortable scooter that is ideal for shopping and other visits. Both models of scooter have a maximum speed capability of 8 MPH; the Frontier is of lighter construction featuring medium range and optimal turning circle; the Pioneer is a medium to long range vehicle with an enhanced weight capacity. Both vehicles feature lighting for use in the dark. When driving on pavements or other off-road public areas, these scooters may only be used at a legal maximum speed limit of 4MPH within the UK. Use the half speed switch to ensure this limit is not exceeded.

The scooters are intended for use on pavements, roads and other smooth hard surfaces. Both models can mount obstacles to a maximum height as shown in the Technical Specification section of this manual and, with careful driving, can tackle moderately difficult terrain, but high kerbs should be avoided when driving on pavements.

Users could endanger themselves and others if they are not capable of driving this scooter safely. Dealers will advise on the most suitable vehicle from the Electric Mobility range, but it is up to users to ensure that they have the manual dexterity to drive the vehicle, adequate sight and hearing to perceive danger in time, and can at all times operate the scooter safely in the expected conditions. If in doubt we suggest you consult a healthcare professional or your nearest dealer for advice on the most suitable scooter for your particular condition. Users should also regularly assess their ability to operate their vehicle safely.

The Rascal Pioneer scooter has larger wheels to enable it to negotiate uneven surfaces, but rutted or soft, slippery grassy areas should always be avoided.



Safety Information

General Warnings

- Warning !** The operation of scooters can endanger the life of the driver or third parties. Any driver should always be fully capable of operating this vehicle safely.
- Warning !** Sitting for long periods may increase the chance of thromboses or pressure sores. Users prone to such conditions are advised to take medical advice.
- Warning !** The Frontier and Pioneer scooters have been designed and tested for drivers with weights up to those in the Technical Specification. These weights should never be exceeded.
- Warning !** Do not exceed the specification; do not modify this scooter or use it other than as a scooter.
- Warning !** Passengers, including children, should never be carried.
- Warning !** Electromagnetic interference may affect the driving of this scooter:
- Do not operate devices such as CB radios or mobile phones while the vehicle is switched on.
 - Avoid getting close to transmitter masts, such as television and radio stations.
- If your vehicle ever starts to operate by itself switch it off and report this to your Dealer.
- Warning !** The operation of any scooter may affect sensitive electronic circuits such as alarm systems or automatic doors in shops.

Driving

Before driving, refer to "Driving Your Vehicle" ... later in this manual

- Warning ! Ambient Operating Temperature Range.** Do not use your scooter in temperatures outside the range stated in the specifications section of this manual. Driving in very hot or very cold conditions can make driving more hazardous.
- Warning ! Freewheel Device/Mode.** Before getting on your scooter always check that the freewheel lever is in the Drive position. When the freewheel lever is in the freewheel position, the main brakes on your scooter will not function. Extra care should be taken with your scooter when it is in freewheel mode as it could move without warning. You must never sit on or try to ride your scooter when it is in freewheel mode as serious injury or death may result.

NEVER SIT ON THE SCOOTER WHEN IN FREEWHEEL MODE.

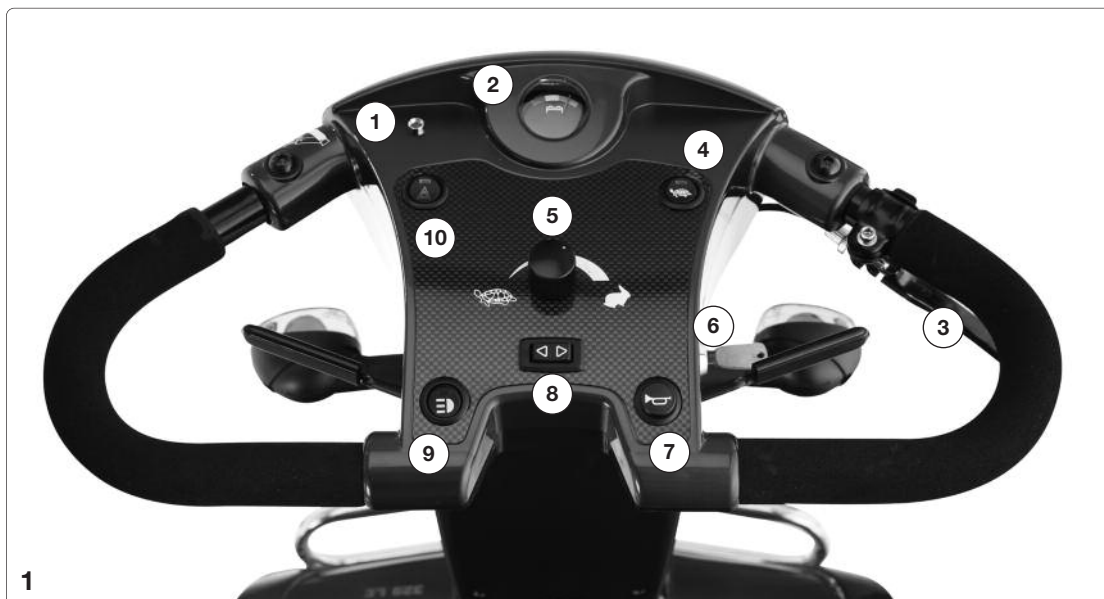
- Warning ! Transferring On and Off.** Do not attempt to get on or off your scooter unless it is switched off, at rest, and on a stable, level surface. Never get on or off on a hill.
- Warning ! Damage.** Before driving off, check the scooter for damage, particularly that which could affect the controls, wheels, freewheel function and/or drive motor.
- Warning ! Footrest.** Before switching on the scooter, always make sure that your feet are safely on the footrest areas. If you drive forward with your feet still on the ground, they could become trapped under the scooter and serious injury may result.
- Warning ! Armrests.** Do not use the armrests as a support for your entire weight when getting in or out of the scooter. Make sure the armrests are lowered and secure before you start off otherwise you may fall out.
- Warning ! Entanglement.** Do not wear clothing or carry items on the scooter that could become entangled in wheels or other moving parts whilst operating the scooter. Severe injury may result.



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- Warning ! Battery Charge Level.** Before driving off, always check the battery indicator. If you are in any doubt, ensure all the batteries are fully charged before starting on a journey.
- Warning ! Castoring.** Be aware that, if you set off when the front wheels are not straight, the initial movement could be partially sideways.
- Warning ! Power.** Unless there is an emergency, do not switch the power off when moving. The Scooter may stop very suddenly. Release the forward / reverse control and the scooter will come to a controlled stop.
- Warning ! Slopes.** On steep slopes the scooter could topple over. Always try to avoid crossing a slope. If you have to cross a slope, take great care to avoid tipping. Never make sharp turns on slopes. Never drive on slippery or icy slopes. - If you are not comfortable with the hill gradient, consider an alternative route. See “Driving Your Vehicle” – Hazards for more advice.
- Warning ! Kerbs.** You should always try to avoid driving up or down kerbs as this may cause the scooter to topple. Use access ramps wherever possible. Never attempt to climb or descend kerbs greater than that noted in the Technical Specification. If you have to climb or descend a low kerb, always tackle it straight on. See “Driving Your Vehicle” – Hazards for more advice.
- Warning ! Speed.** Turning at maximum speed might cause the scooter to topple over. Always slow down for turns. Always slow down when amongst pedestrians and ensure you do not run into them.
- Warning ! Stopping.** If the scooter stops suddenly when turning, it might topple. Try not to brake when turning. Always take particular care when turning.
- Warning ! Reversing.** Always take particular care when reversing the scooter as injury to other people may occur if safe distances are not maintained.
- Warning ! Leaning Over.** Do not lean sideways, as this could cause the scooter to topple.
- Warning ! Escalators.** Never drive the scooter onto an escalator as this could cause the scooter to topple and result in severe injury.
- Warning ! Roads.** In the United Kingdom, Mobility scooters are not permitted on dual carriageways without an additional amber warning beacon being fitted. Never take your scooter on a Motorway. For more information please refer to the Highway code.
- Warning ! Driving in Poor Visibility.** Scooters are not easily seen. Always turn your lights on in poor visibility or when travelling on roads. Consider wearing a high visibility jacket to warn others of your presence.
- Warning ! Carrying Items.** Do not carry or attach anything to the handlebars or controls as this could affect the driving safety.
- Warning ! Front Basket.** The basket mounted on the front has a weight limit of 10 lbs or 4.5 kgs. Do not exceed this as it could affect steering. Do not carry or attach anything to the handlebars or controls as this could affect the driving safety.
- Warning ! Hot Surfaces.** If the scooter is left out in the sun, surfaces could become extremely hot. Always try to park the vehicle in the shade.
- Warning ! Seats in Vehicles.** This scooter is not suitable for use as a seat for an occupant when in a motor vehicle.
- Warning ! Climbing Angle.** The Frontier scooter has a range of safe climbing angle which is dictated by the user weight. Do not exceed these limits as shown in the Technical Specifications section of this manual.
- Warning ! Punctures.** Should you experience a punctured tyre, do not continue to drive and call your dealer for assistance. The tyres fitted to your scooter are not user-seviceable.
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Controls - Dashboard

Before driving your vehicle it is important to familiarise yourself with the controls. Do not attempt to drive the vehicle before reading the rest of this Handbook.



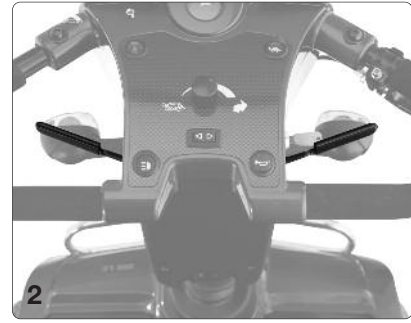
Dashboard Description

1. **Power Indicator Lamp.** The lamp illuminates when the ignition is on. If there is a fault it will flash.
2. **Battery Indicator:** This instrument shows the level of charge in the batteries. When in the green area the batteries are fully charged. When in the yellow area the batteries need recharging and when in the red area the batteries **urgently** need recharging. Note: When the vehicle is climbing a steep incline or starting off, the level may drop momentarily; this is normal.
3. **Emergency brake.** A hand operated brake for use in emergencies. See "Brakes" section of this manual.
4. **Speed Selection.** The speed selector (Hi – Lo Switch). When Hi is selected the maximum speed is 12.8 k.p.h. or 8m.p.h and when Lo is selected is restricted to 4 m.p.h. The Lo setting should always be used on pavements.
5. **Rotary Speed Control:** This controls the top speed of your scooter. When the knob is turned anticlockwise to the left, the scooter is limited to the slowest speed, marked by a tortoise. As the knob is turned to the right the speed will increase to a maximum, marked by a hare. Set the speed before you move off. Do not adjust the speed control dial when the vehicle is moving.
6. **Ignition Switch:** Insert your key and push INWARDS first, and then turn the key to the right to the "ON" position. To turn off, push the key INWARDS and turn the key to the left. Do not leave the ignition on when not in use, especially when charging the vehicle.
7. **Horn:** Press the button on the lower right hand side and the horn will sound, if power is on. Release and the horn will cease.
8. **Direction Indicators.** A rocker switch at the bottom centre of the panel controls the direction indicators.
9. **Lights.** The headlight and side lights are controlled by the switch on the bottom left hand side of the dashboard.
10. **Emergency flashing indicators.** The switch on the left hand side of the rotary speed controller operates the emergency flashing indicators, which should be used to indicate you need help or to warn others of your position.

Controls - Driving Controls/Accelerator

Finger control - To operate, turn on the ignition.

Pull the right hand lever towards you and the machine moves forward (Fig.2) The more you pull the lever the faster the scooter goes. To brake, release the lever. Again the faster the lever is released the quicker you will stop. To reverse, pull the left lever towards you. **Do not** pull both levers at once. Note. The controls can be changed for customers with a left-hand bias. Please contact your local dealer for information.



Freewheel Device

When the vehicle is switched off the brakes are automatically engaged. This is called "Failsafe Braking". Also, if the batteries are flat, the brakes are applied. There may be occasions where you may wish to move the vehicle without power. To do this there is a Freewheel Device fitted.

The Freewheel device allows the vehicle to be pushed without power. To activate, first locate the lever (Fig.3). When standing behind the scooter, it is located on the right hand side of the rear of the vehicle - See Illustration.



- Make sure the ignition is switched off.
- Move the lever **UP** The vehicle can now be pushed in Freewheel.
- Move the lever **DOWN** to engage drive. The vehicle is now braked. This is the normal operating position.
- **IF YOU ARE NOT COMPLETELY SURE OF THIS FEATURE CONTACT YOUR DEALER BEFORE OPERATING THE SCOOTER.**

Pull the lever **UP** to enable the vehicle to be moved without power. Braking is disabled. **NEVER** sit on the vehicle with the lever in this position. Push the lever **DOWN**. This is the normal operating position. The brakes are enabled, and the vehicle can only operate with the lever in this position.

Brakes

There are 3 braking systems. The first works with the finger controls. When the finger control is released the scooter will automatically brake and bring the scooter smartly to a stop. When the scooter stops a parking brake will engage. This will stop the vehicle rolling forward or backward. When you start this brake will automatically disengage.

If the battery should become exhausted the brakes automatically engage. Note that even when freewheel is selected, a secondary braking system is applied automatically to limit the maximum speed. You may notice this system when moving the scooter in freewheel. Both Pioneer and Frontier models are also provided with an emergency brake (Fig.4). This braking system is controlled by pulling/compressing the lever on the right hand side of the handle bars/ tiller (Fig.4). The more pressure you apply to the lever the heavier the braking effect will be.



Tip: If you wish to lock this braking system on permanently to act as a supplementary parking brake, you may do this by first pulling / compressing the lever and then by pressing the latch pin into position. When you release the lever it will stay compressed. Remember to always disengage the locking latch pin before use by compressing the lever fully once more. - The latch will automatically disengage.



Warning! If the freewheel device is in “freewheel” the automatic braking is disabled. Never select the freewheel device if the scooter is on a slope or could be pushed onto a slope.

Warning! Do not use the emergency brake for normal driving and never engage the lever locking latch pin unless the scooter is stationary.

Armrest adjustment

When getting seated on the scooter lift the armrest up. When riding always have the armrest in the down position. Avoid pinching fingers as you lower the armrest. If you require more room in the width of the seat undo the knobs at the rear of the seat (Fig.5). Slide the armrests in or out to suit. Tighten both knobs to clamp. To ensure that the user is sitting centrally, the armrests should always be adjusted to be equidistant from the centre of the seat.

Note: The Frontier model features Allen bolts for tightening the armrests (Fig.6). Please use the Allen key included in the tool kit (Fig.7).



Warning! Never drive with the armrest up or with the armrest knob / allen bolt loose.

Swivel seat

This allows easy access

- 1. To operate**, locate the release lever under the seat (Fig.8).
- 3. Pull the lever up** and the seat will release allowing it to rotate.
- 4. Release the lever** and the seat should lock automatically, but always check it has.



Warning! Do not use this device if the vehicle is on a slope. Always check the seat is locked in the forward position before driving the vehicle.

Seat Back Adjustment

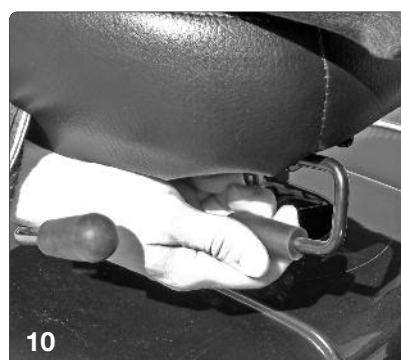
By operating the lever on the right hand side at the base of the seat back, the seat back folds down (Fig.9). Be careful, as the spring is quite strong, so hold the back and ease it down into the horizontal position rather than letting it go.

The Rascal Frontier has a standard seat that will fold forward, the Rascal Pioneer model features a seat that both reclines and folds forwards.



Seat Position Adjustment

By operating the lever under the seat on the right hand side at the front, the seat can slide back or forwards so that you can get a comfortable driving position (Fig.10). Unsure the seat is locked in place after adjustment and before driving. NB: Only available on the Rascal Pioneer.



Tiller Angle Adjustment

The tiller can be folded down for transporting and/or storage. Take care when lowering the tiller not to pinch your fingers at the base of the tiller. Locate the lever below the dash on the tiller (Fig.11).

Push the lever down and the tiller will be free to move. The tiller can then be moved to the horizontal position (Fig.12). Once in position, ensure it is locked.

The tiller angle can be adjusted to achieve a comfortable driving position. Locate the lever below the dash on the tiller. Pull the lever down and the tiller will be free to move. The tiller can then be moved to the most comfortable driving position. Once in position, ensure the tiller is locked.

The tiller dash angle adjusts as the tiller is moved back and forward so that the controls are easily operated and viewed.



Warning! Before driving, always check that the tiller is securely in the most comfortable position and cannot move forwards or backwards.

Warning! Do not hang anything on the tiller tiller and/or tiller levers

Driving the Vehicle



Warning! Read this before driving the vehicle! Whether or not this is your first mobility vehicle, please read these guidelines as all vehicles differ. Failure to do this may cause damage to you, a third party or the vehicle.

1. **Before you set out**, do check the weather forecast. We suggest that you make sure you are wearing suitable clothing, whether your journey is long or short.
2. **Range.** Your scooter has a limited range. Always ensure that your planned journey does not exceed the maximum range in the Technical Specification Sheet and that your battery is fully charged.
3. **If you are taking medication** check with your doctor or physician that your ability to control the vehicle will not be impaired and do not drink alcohol and drive.
4. **Only use the vehicle for the purpose its intended for.** Do not drive through water or on slippery surfaces; do not transport more than one person; do not tow other vehicles or carry excess weight.
5. **Check that the freewheel lever is not in the freewheel position / mode.**
6. **Check the battery charger is disconnected.**
7. **Check that you are properly seated.**

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8. **Check the backrest is correctly adjusted and locked in position.**
 9. **Check that none of the items in your storage compartment and/or shopping basket are likely to fall out** or become entangled in the scooter wheels or other mechanisms.
 10. **Ensure your feet are securely on the footrest areas.**
 11. **Check you have adjusted the seat as instructed in this manual.**
 12. **Make sure the way ahead is clear.**
 13. **Switch on the power.** Check the battery level indicator is showing a high charge level.
 14. **Speed Control.** Set the speed control to a low setting.
 15. **Gently actuate the finger controls (either forward or reverse) and steer in the direction required.**
The vehicle will now move off. The further you push the paddle (either forward or reverse) the faster the vehicle will go.
 16. **To brake, return the paddles to the starting/neutral position. If you become unsure or feel unsafe release the paddles immediately.**
Note: Never push or pull both paddles at the same time as you may damage your scooter's control system and cause it to behave erratically.
 17. **As you get accustomed to the power you can increase the speed.**
 18. **Switch off when not in use.** To conserve your batteries and prevent the vehicle accidentally moving, always switch off the power when your Scooter is not in use. (On/Off or ignition key).

Tip: If you do leave your scooter switched on for a prolonged period of time without using it, it will enter a sleep mode to conserve power. To reactivate the scooter, the On/Off key will need to be turned to the "Off" position and then back to the "On" position.



Driving the vehicle - hazards

Warning! Before driving the scooter you should be aware that, under certain circumstances it could become unstable and tip over. Your scooter has been designed to operate on paved, even surfaces and should not be used on rough or rutted terrain. Do not exceed the maximum safe slope recorded in the Technical Specifications.

1. **Getting on and off the vehicle:** When getting on make sure that the vehicle is on level ground, and not in freewheel mode. Ensure that the armrests are secure. When getting off, park on level ground, turn off the ignition and remove the key before leaving your seat. Make sure you get off the vehicle in a safe area.
2. **Tiller Position:** Drive with the tiller in an upright position that feels comfortable with the controls in easy reach.
3. **Kerbs and Obstacles:** Try to avoid kerbs and obstacles. Never ride up or down kerbs or obstructions higher than that in the Technical Specification Sheets. Always tackle obstacles head on. Use ramps wherever possible and ensure that all wheels will fit on the ramp. Always try to avoid crossing a slope. If you have to cross a slope, take great care to avoid tipping. Never make sharp turns on slopes or back down a slope.

-
4. **Hills & Slopes:** Going Up Hill. Lean forward when going up. Make sure you have enough speed to climb the slope. Do not stop or turn the vehicle around. If you have to turn while climbing an incline, keep going until you reach a level area. If you have to start on an incline, lean forward and apply power slowly – do not start and stop. If you are not comfortable about tackling a gradient, consider an alternative route. Note: Always check that the battery level is high; going up hill takes a lot of energy. If the level drops too low the vehicle will cut out leaving you stranded.
 5. **Hills & Slopes:** Going Down Hill. Lean back in the seat when going down, and turn the speed control dial to low. If you are not comfortable about tackling a gradient, consider an alternative route. Try to avoid crossing slopes – always drive straight up or down the slope.

NEVER BACK DOWN A SLOPE!

6. **Terrain:** Do not drive your vehicle across deep, soft or slippery terrain (for example, soft dirt, sand, or loose gravel). You could get stuck. Also avoid rutted, bumpy ground and try to keep to well prepared surfaces.
7. **Turning:** Always slow down before a turn; turning at speed can cause the scooter to topple. Look in the direction you are travelling – If there is a blind corner sound the horn.
8. **Turning Circle:** Practice manoeuvring your scooter so you can judge the turning circle. This is important to avoid tipping off kerbs or for negotiating in tight spaces.
9. **Bad Weather:** If it is snowing or icy stay at home! Remember that ice, snow and slippery surfaces such as manhole covers, wet grass and drains could affect braking and steering. Use caution at all times.
10. **Pneumatic Tyres:** To give you a smooth comfortable ride over uneven ground your vehicle is fitted with pneumatic tyres. Make sure they are at the correct pressure; see the Specification Sheet. Should they become damaged they should be replaced or repaired by your dealer. If you are particularly concerned about punctures consult your dealer for advice on puncture proofing products.
11. **Pavements:** It is illegal to drive at more than 4 m.p.h. on the pavement. Never select the “Hi” setting if you are to drive on a pavement or in an area where you could collide with pedestrians.
12. **Shower Rooms or Washing:** Never take your scooter into a shower or steam room, and never hose or jet-wash it down. Its sensitive electronics could malfunction if they get wet or damp.
13. **Immersion:** Never enter large puddles or areas of water where the depth and/or current is unknown. Immersion or partial immersion of the scooter may damage it and could leave you stranded.

Transporting your Scooter



Warning! Dismantling the scooter involves lifting and handling heavy parts. Weights are given in the Technical Specification; consider if you need help in handling parts before you try to lift them. These Scooters are best transported in Estate cars and MPVs using ramps. Contact your dealer for advice on how best to safely transport you scooter in your vehicle. They can provide and demonstrate the use of suitable ramps.

Warning! Pinching or Crushing. Be careful to avoid being pinched or having your hands crushed when lifting or handling parts. Wear gloves whenever possible.

Warning! This vehicle is not suitable for use as a seat for an occupant in a motor vehicle.

To transport your scooter you may need to remove the seat lower and the tiller in order to reduce the overall height. You are advised to wear gloves during this operation .

1. **Lift off the front basket.**
2. **Remove the seat** by lifting it off the seat post while lifting the seat lever (Fig.13). A small rotation is sometimes necessary to free the seat. Warning, the seat is heavy and two persons may be needed.
3. **Lower the tiller to its horizontal position** and lock using the tiller locking lever (Fig.14 & 15).
4. **Secure the tiller with a strap** to prevent the tiller moving.
5. **Make sure that the ramps are secure.**
6. **Drive the scooter up the ramps** and into the vehicle.
7. **Ensure that all parts are secure** so that they cannot move while driving.



Warning! Only use ramps to position the scooter into the back of a vehicle. Do not try and lift it - back injury may result!



Assembling your Scooter following Transportation

Warning! Assembling the scooter involves lifting and handling heavy parts. Your dealer should advise you on the best way to assemble your scooter.

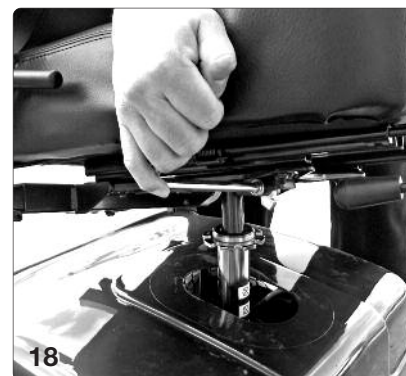
Warning! Pinching or Crushing. Be careful to avoid being pinched or having your hands crushed when lifting or handling parts. Wear gloves whenever possible.

Warning! Never unload your scooter on sloping or uneven ground. It could run down the slope and injure someone.



Unload your scooter from the vehicle, using ramps and position it on level ground. Check it is undamaged before starting to assemble it as follows:

1. **Operate the tiller unlocking lever** by pushing it down towards the tiller base (Fig.17). The tiller is now free to be raised to the upright position. Re-lock the tiller by pulling the lever upwards.



2. **Lift the seat and, while lifting the seat lever,** (Fig.18) insert the seat pin into the seat post on the rear chassis. Ensure it is fully engaged, the seat does not rock or rotate, and the seat lever has engaged so locking the seat in the forward position (see photo). Note that two people may be needed for this operation
3. **Finally check the scooter is not damaged and it is properly assembled.** You are now ready to drive the scooter away.

Battery Charging



Warning! When charging batteries **NEVER** smoke or charge batteries in a place where there are naked flames such as gas-fired heaters as, under exceptional circumstances, batteries may give off gases that could ignite and explode. Always make sure that the battery charge lead and charger are not damaged. Never charge the scooter batteries outside as the charger is not designed to get wet. If the charger appears damaged in any way do not use it and contact your dealer for a replacement.

Warning! Always charge in a dry, well ventilated area.

Warning! It is strongly recommended that the mains socket used for charging the scooter is protected by a 30 mA RCD (residual current device). Many buildings have sockets protected by a system based RCD. If you are in doubt as to the level of protection in your charging location then either purchase a plug in RCD or consult a qualified electrician to verify that your charging location mains sockets are protected.

Warning! If batteries are damaged or frozen they could heat up during charging and in an extreme case, explode.

Warning! Do not attempt to open the battery enclosure, there are no user serviceable parts inside.

Warning! Never use a different battery charger to that supplied by your dealer. Damage or injury may occur if you do!

Warning! When charging batteries **NEVER** connect or disconnect the charger from the battery pack while it is still connected to the mains. – Remove the charger mains plug from the wall socket having first switched the mains socket off if a switch is provided.

1. **Park the scooter in a well ventilated dry place.** The charging socket is located on the upper left tiller behind a swing cover (Fig.18).
2. **Open the protective cover and with the charger disconnected** (Fig.18) from the mains, push the charger plug into the charging socket on the tiller. Plug the charger into the mains wall outlet and switch the outlet on if a switch is provided.
3. **When the batteries are fully charged remove the mains plug from the wall socket** and the charging plug from the charging socket. Reposition the cover over the charging socket to keep the dirt and moisture out.
4. **Do not leave your scooter connected to the charger with the mains switched off** as this will gradually discharge your batteries. The battery charger (Fig.19) has two indicating lamps that change colour depending on the charge state of the batteries.



When the charger is connected and switched on, Lamp 1 will illuminate red and Lamp 2 will illuminate amber. When the batteries are fully charged, Lamp 1 will illuminate red and Lamp 2 will illuminate green.

If Lamp 1 only illuminates red, this means that the mains power is on but the batteries are not charging.

- **Lamp 1 - Red and Lamp 2 off** - Mains Power on - not charging
- **Lamp 1 - Red and Lamp 2 - Amber** - charging
- **Lamp 1 - Red and Lamp 2 - Green** - fully charged
- **No illumination** - mains not connected to the charger.

Warning! Never disconnect a battery while the charger is connected to the mains - Never charge your batteries outside or where the charger may get wet.



Charging your Batteries

Further information

When you receive your vehicle the batteries are only partially charged – always fully charge them before use - preferably over-night.

The batteries are the lifeblood of your vehicle. Their characteristics can change depending on charging, temperature, usage and other factors. Listed below are guidelines to prolong battery life.

- **After using the scooter, always charge it at the end of the day - even after a short journey.**
- **If you do not use the vehicle for a prolonged period, place the batteries on charge once a week, overnight.**
- **Always use the correct charger with the scooter.** The Rascal Frontier and Pioneer scooters can only be charged with the charger model : HP8204-B or equivalent charger approved by Electric Mobility.
- **If the batteries have been flat for a long time (about 2 months) it is recommended you contact your dealer before charging, see warning below.**
- **Do not charge the batteries in the open** – it may rain and the battery charger is not waterproof / suitable for outdoor conditions.



Warning! Never disconnect a battery while the charger is connected to the mains - Never charge your batteries outside or where the charger may get wet.

- **Keep the scooter in a well-ventilated area** and away from any naked flame.
- **Do not part-charge the scooter's batteries.** Allow the charger to complete its cycle.

Batteries are expensive to replace – it is wise to look after them.



Warning! If one or both batteries are damaged they could heat up when charging and, in an extreme case, explode.

Notice Return your unserviceable batteries to your supplier or ensure they are disposed of in accordance with the environmental regulations applicable at the time.

Additional Information

Owners Manual: Replacement copies are available from: Electric Mobility Euro Ltd. Canal Way, Ilminster, Somerset, TA19 9DL Telephone: 01460 258100.

If you are visually impaired, please contact the Company to discuss your requirements. However, you should not drive a vehicle in a public place if you cannot see well enough to ensure your own, and others safety. Each vehicle comes with a copy of the BHTA Highway Code. Please make sure you read it. Telephone BHTA on 02077 022 141 for a new copy.

Important note on the BHTA Highway Code: On page 3 of the Code under "Consider Investing in a mobile phone" Read the section of this manual under "Safety Information". If in doubt contact your dealer. For Information regarding other Electric Mobility products contact your dealer or log on to the Electric Mobility Website www.electricmobility.co.uk

Servicing and Maintenance

1. **This vehicle is designed for minimum maintenance.** However it is recommended that your vehicle is serviced at least once a year, by an approved Electric Mobility Dealer. If the vehicle is used constantly we recommend a twice yearly maintenance.
2. **Ensure the engineer stamps the Service Log** (page 27) on completion of all servicing. Keep all receipts for servicing and repairs with this handbook. This may add value when selling the vehicle.
3. **When the vehicle is due for its annual service make sure you report any concerns you have,** preferably when you book the service (See points to look out for below).
4. **On completion of the service, always test the vehicle** before the engineer leaves and make sure you are satisfied with the work carried out.

Points to look out for:

- Are there any strange noises from the wheels or does the frame creak when going over rough ground?
- Is the battery charged up correctly – is the "full" charge green light on after charging?
- Is the steering tight or is it loose when turning? Is there any play in the steering?
- Are the brakes, including the handbrake, effective ?
- Has anything come loose?
- Does the vehicle perform as well as it did when it was new?
- Are there noises or rattles that were not there before?
- Are there any signs of damage, corrosion or cracking?

Troubleshooting Guide

This table is a guide to fault finding. The fault may be a simple fix. If you have any doubts phone your dealer.

Symptom	Solution
• Scooter does not move. when power is switched on.	• Batteries flat - check level. • Is the charger connected? Has it fused? • Has the battery cut-out operated? • Is Freewheel engaged? • Freewheel has been selected while power is on Ensure freewheel is not selected; switch off and on NB the power indicator may flash indicating that freewheel has been selected..
• Steering is loose or wobbly when driven.	• Check for tyre damage or punctures. • Damaged steering - contact dealer. • Loose seat - contact dealer.
• Vehicle behaves erratically when driven. or judders or cuts out ?	• Possible electronic problems - contact dealer.
• Short Range	• Check tyres for damage. • Check batteries are fully charging. • Check vehicle moves easily in Freewheel • Check handbrake adjustment



Tip: To save the batteries, the scooter controller has a sleep mode, which is activated if the scooter is not used but left switched on for some time. To reset, switch the scooter off and then on again.

Rascal Frontier Diagnostic Functions

Your Scooter Controller provides diagnostic information in the form of flash-codes. The lamp on the battery indicator flashes to indicate a problem has been detected. On switching on, the controller conducts a diagnostic test. While this test is in progress the lamp will flash and, if no fault is detected it will remain on. If there is a fault, the lamp will flash a sequence of flashes to indicate what the fault is.

Flashes of Power Indicator	Indicated Fault and Corrective Action
1	Battery needs charging
2 or 3	Battery voltage incorrect - change battery
4	Electrical overload - switch off, wait 5 minutes
5	Brake fault or switched on when in freewheel
6	Key has been turned on when finger control lever active
More than 6	Errors detected - contact your dealer

Rascal Pioneer Diagnostic Functions

Your Scooter Controller provides diagnostic information in the form of flash-codes. The lamp on the battery indicator flashes to indicate a problem has been detected. On switching on, the controller conducts a diagnostic test. While this test is in progress the lamp will flash and, if no fault is detected it will remain on. If there is a fault, the lamp will flash a sequence of flashes to indicate what the fault is.

Flashes of Power Indicator	Indicated fault and Corrective Action
1	Battery needs recharging or bad connection with batteries. Check connections, and recharge batteries. An audible beeping will also be heard when the batteries need recharging.
2	Bad motor connection. Request assistance from dealer who will check all connections between controller and motor.
3	Short circuit between motor and battery connection. Contact dealer.
4 & 5	Not used
6	Controller inhibited from operation. Disconnect battery charger and check if this resolves the problem. Otherwise contact dealer.
7	Throttle fault. Finger control levers must be in neutral (centred) position before key is turned on. Switch scooter off, centre levers, and switch back on. If fault persists, contact dealer.
8	Controller fault. Inform dealer who will check connections & controller.
9	Scooter left in freewheel or has a bad parking brake connection. Engage drive, and switch scooter off and on. If this fails to cure the problem, check parking brake and ensure it stops the vehicle. Inform dealer who will check brake and motor connections.
10	Excessive voltage detected at controller. Check battery connections.

If in doubt switch off and switch on – if this does not cure the fault contact your dealer. Your dealer is there to help you but they can only do this if you give them as much information as possible. Remember correct information will get the problem fixed quicker and save you money. Phone the dealer and explain exactly what the problem is, recounting as much detail as possible including the indicated faults.

User Maintenance

It is important for safety that you carry out the following checks before use.

1. **Visually check the machine** for damage.
2. **Visually check the tyres** for damage.
3. **Check the steering moves freely.**
4. **Check that the tiller is secure and that the tiller thumb-wheel is tight.**
5. **Check that the seat is located correctly.**
6. **Check the armrests are secure**
7. **The battery should be fully charged.**
8. **Check that all lighting functions properly, including indicators, brake, sidelights and front lights.**



Tip: *Keep your vehicle clean by using a damp cloth and soapy water – never use a hose or jet wash.*

Important – Possible faults

As you get used to your vehicle you will get a feel for how it behaves. If something feels unusual, for instance the vehicle does not accelerate or brake smoothly, the handbrake is not effective, or the brakes are not holding on a slope or the steering feels different, contact your dealer immediately and explain to the engineer exactly what the problem is. If you are in any doubt do not drive the vehicle but get help.

Disposal

Contact your dealer for advice before you consider disposing of your scooter. They will be aware of the environmental regulations in force at the time and will assist you to meet the applicable environmental legislation.

Additional Safety Information

Carrying Weight on the Vehicle

Front Basket	The basket mounted on the front has a weight limit of 10lbs (4.5kgs). Do not exceed this as it could effect the steering.
Handlebars	Do not carry or attach anything to the handlebars. Anything attached to the handlebars will affect the control of the vehicle.
Tiller adjustment lever	Do not hang anything on the tiller locking handle; the tiller might become loose and make driving difficult.
Floor Area	Do not use the floor area to carry things. They might fall off, or obstruct your movement.
Modifications	Unauthorised modifications could result in injury or permanent damage. Such modifications will invalidate any guarantees.
Other Items	Only fit approved products or accessories.

Child Safety

This product is designed to be operated by adults. Children should not be allowed to tamper with the controls or play on the vehicle. **Do not carry children as passengers.** The product is designed for single person use only. Keep all packaging well away from children. They could be harmed.

Frequently Asked Questions

I want to transport my vehicle in a car.

These scooters are not designed to be dismantled. If you need to regularly transport a scooter in a vehicle, then your dealer will advise you on specialist vehicles which are designed to fold and dismantle to make it easier to load them into a car. Your scooter can be loaded into an estate car or an MPV using ramps. Make sure your dealer has demonstrated the easiest way of doing this.

Can I fit weatherproofing such as a canopy ?

Yes, but remember that canopies can adversely affect stability and handling. Ask your dealer for advice.

How long will my batteries last ?

This is a difficult question as it depends on many factors. The life of a battery depends upon the number of cycles the battery goes through, the peak loads and on the conditions of use. Some general advice about battery care:

- Keep it charged, and do not let the battery run completely flat.
- Ensure both batteries are fully charged at the end of the charging cycle
- Batteries may not perform as well in very cold weather.
- Change your battery if you find it is not performing as well as new.

Care can prolong the life of the batteries but remember that, in time, all batteries will fail to perform to specification.

What range can I expect ?

The generally expected range is recorded in the Technical Specification sheet. Remember, range can be affected by many things such as:

- Temperature. Cold weather can reduce the output of the batteries.
- Type of terrain. Obviously climbing hills takes more energy than driving on the flat.
- Weight of the person.
- The condition and charge of the batteries.
- Faulty or old batteries or a faulty charger.

NB. Always use the correct charger with the correct batteries and ensure all batteries are charged before you start out.

How long should I keep my vehicle before I change it?

It is important that the vehicle you have suits your needs and abilities. Your scooter should serve you well for many years but change it if at any time you feel it no longer meets your needs. Consult your dealer on the condition of your vehicle and remember vehicles of any type become more expensive to maintain the older they get.

Engineer's Checklist for Rascal Frontier and Pioneer

Obtain all comments from the customer on the condition and serviceability of the scooter and then complete an Initial diagnostic road test. Record all defects to be corrected. Now check, test and complete the following:

- Wheel bearings wear and lubricate
- Wheel alignment and tracking
- Speed dial works correctly
- Speed Hi Lo selection (if fitted) operates correctly
- Wear or damage to tyres or wheels
- Bodywork fixtures for damage, or cracking
- Throttle play and adjustment
- Battery enclosure contacts & signs of corrosion
- Check all cables for damage, abrasion, corrosion and that screening is intact. Replace as necessary
- Steering bearing, adjust as required
- Tiller adjustment - functioning, wear and damage
- Tiller lock – functioning, wear and damage
- Seat mounting for wear or damage
- Revolving seat mechanism locates correctly and spring lever engages. Lubricate as necessary.
- Seat position adjustment, Does the seat move frontwards and backwards smoothly? Does the seat lock?
- Handlebar alignment
- Motor brush wear
- Motor speed check
- Freewheel operation
- Electromagnetic brake operation - does the scooter slow when the hand control is released? Does the brake engage when the scooter is pushed when in freewheel ?
- Emergency Brake. – does the emergency brake prevent the vehicle from moving? Does it need adjustment?
- Frame for damage or cracks
- Front and rear chassis attachment points for corrosion, wear or damage
- General check for corrosion, repair/protect as necessary
- All operational controls work correctly
- Battery condition and charger operation
- Tighten all nuts & bolts
- Check all vehicle lights operate correctly and the horn functions
- Correct all defects found and determine if the vehicle is roadworthy.
- Final road test
- Clean vehicle
- Customer road test

Important Note for the Engineer

Enquire if the customer is satisfied with the product. Please report all points good or bad directly to: Electric Mobility 01460 258100 If you have any comments please include them.

Guarantees

12 Month Guarantee

Electric Mobility Euro Limited (the 'Company') guarantees its products against defects in materials and workmanship under normal use for a period of one year from the date of purchase by the original retail purchaser (the 'Guarantee Period'). If a defect arises and a valid claim is received within the Guarantee Period, at its option, the Company may either (1) repair the defect at no charge, using new or replacement parts; (2) replace the defective part with a new part or a part that is either the same as, or functionally equivalent to, the original part; (3) replace the product with a new product which is the same as, or at least functionally equivalent to, the original product; or (4) refund the purchase price of the product.

A replacement product or part assumes the time remaining on the Guarantee Period of the original product or 30 days from the date of replacement or repair, whichever provides longer coverage. When a product or part is exchanged, any replacement item becomes the property of the consumer and the replaced item becomes the Company's property. When a refund is given, the product for which the refund is provided must be returned to the company and becomes the Company's property.

Lifetime Frame Guarantee

The Company guarantees the frame of its products against defects in materials and workmanship under normal use for the lifetime of the product. If a defect arises and a valid claim is received under the Lifetime Frame Guarantee, at its option, the Company will repair the defect at no charge, using new or replacement parts or will replace the frame. When a frame is exchanged, the replacement frame becomes the consumer's property and the replaced frame becomes the Company's property. The Lifetime Frame Guarantee covers the cost of parts and materials only. Services performed by the Company in replacing the parts or materials or the frame may be subject to additional charges for labour and transportation.

Exclusions and Limitations

The 12 Month Guarantee and the Lifetime Frame Guarantee (the 'Guarantees') apply provided only that the guarantee card has been correctly filled out and returned to the Company within 15 days from delivery of the product to the original consumer. The Guarantees do not apply to the following: (1) damage caused by accident, abuse, misuse, flood, fire, earthquake or other external cause; (2) damage caused by operating the product outside the permitted or normal use of the product; (3) damage caused to products that were not operated, maintained or serviced in accordance with the Owner's Manual; (4) to a product or part that has been modified or repaired otherwise than in accordance with the Owner's Manual or with the express written authority of the Company; or (5) to normal wear or tear, normal maintenance, service or periodic adjustments necessitated by normal use. In addition to the above, the Company shall be under no liability in respect of any defect arising from wilful damage, negligence, or misuse.

The Guarantees only apply to the original purchaser and are non-transferable. Except in respect of death or personal injury caused by the Company's negligence, the Company shall not be liable by reason of any representation (unless fraudulent), or any implied warranty, condition or other term, or any duty at common law or under the terms of the Guarantees, for any indirect, special or consequential loss or damage (whether for loss of profit or otherwise), costs, expenses or other claims for compensation whatsoever (whether caused by the negligence of the Company or its employees or otherwise) which arise out of or in connection with the supply of the product(s) or their use or resale, and the entire liability of the Company under or in connection with the products and the Guarantees shall not exceed the price paid for the products. Any descriptions, specifications, samples, models, bulletins or similar materials used in connection with the sale of products by the Company are only for information and should not be construed as warranties.

The consumer's statutory rights are not affected by the Guarantees.

Technical Information Regarding EMI

Important Technical Information regarding Electromagnetic Interference (EMI)

The intensity of interference from electromagnetic energy is measured in volts per meter (v/m), which refers to the strength of the electrical source (voltage) as it relates to the distance away from the object being considered (in meters). Resistance of a scooter/wheelchair to certain EMI intensity is commonly called its “immunity level”. 20 volts/meter is a generally achievable and useful immunity level against interference from radio wave sources (the higher the immunity level, the greater protection).

Your scooter has been tested and found to meet the required immunity level from Electromagnetic Interference (20v/m): the recommended density of interference from electromagnetic energy.



Warning! Even with the immunity level of 20 volts/meter, certain precautions must be followed to ensure your scooter/wheelchair will not be affected by outside electromagnetic sources.

- Do not operate devices such as CB radios or mobile phones while the vehicle is switched on.
 - Avoid getting close to transmitter masts, such as television and radio masts.
 - Note you may experience interference when close to ambulance or fire stations.
- If your vehicle starts to operate by itself switch it off and report this to your Dealer.

Technical Specification - Rascal Frontier Scooter

Wheelchair type Class	Class A, B or C	Class C
Department of Transport Class	Class 1 2 or 3	Class 3
Overall dimensions fully assembled	length x width x height mm (in)	1430 (56) x 650 (26) x 1020 (40)
Dimensions seat removed tiller folded	length x width x height mm (in)	1430 (56) x 650 (26) x 730 (29)
Maximum carrying capacity at 7° incline*	kg (lb)	136 (300)
Maximum carrying capacity at 10° incline*	kg (lb)	106.5 (235)
Mass (weight) including batteries (55Ah)	kg (lb)	99.5 (219.3)
Battery voltage and maximum capacity	volts and ampere hours	12V 55Ah x 2
Type of seat	Captain (regular)	Swivel, folding back & arms with width adjustment.
Mass (weight) of seat	kg (lb)	14.5 (32)
Wheel size	front/rear mm (in)	Front wheel 260 x 76 (10 x 3) Rear wheel 291 x 76 (11 x 3)
Type of tyres	type	Pneumatic
Tyre Pressures normal	front/rear p.s.i. (bar)	36 (2.48) / 36 (2.48)
Maximum speed	km/h (m.p.h.)	12.9 (8)
Minimum braking distance from maximum speed	metres (feet)	3.2 (10.5)
Range on full charge and flat ground	km (miles)	Up to 40 (25)
The turn-around width	m (ft)	1.4 (4.6)
The maximum safe slope	degrees of slope	10° & 7° - see carrying capacity* - Do not exceed - the scooter may topple
The maximum climbing ability facing upwards	degrees of slope	10° at 235lbs - see max carrying capacity* 7° at 300lbs - see max carrying capacity*
Ground clearance	mm (in)	90 (3.5)
Maximum obstacle climbing ability	mm (in)	100 (4)
Maximum safe descendable kerb height	mm (in)	100 (4)

Technical Specification - Rascal Pioneer Scooter

Wheelchair type Class	Class A, B or C	Class C
Department of Transport Class	Class 1 2 or 3	Class 3
Overall dimensions fully assembled	length x width x height mm (in)	1470 (58) x 645 (25) x 1300 (51)
Dimensions seat removed tiller folded	length x width x height mm (in)	1470 (58) x 645 (25) x 730 (29)
Maximum carrying capacity	kg (lb)	159 (350)
Mass (weight) including batteries	kg (lb)	130 (286.6)
Battery voltage and capacity	volts and ampere hours	12V 75Ah x 2
Type of seat	Captain (enhanced)	Swivel, head rest, reclining/folding back & arms with width adjustment and seat slide function.
Mass (weight) of seat	kg (lb)	18 (39.6)
Wheel size	front/rear mm (in)	305 x 76 (12 x 3) / 305 x 76 (12 x 3)
Type of tyres	type	Pneumatic
Tyre Pressures normal	front/rear p.s.i. (bar)	36 (2.48) / 36 (2.48)
Maximum speed	km/h (m.p.h.)	12.9 (8)
Minimum braking distance from maximum speed	metres (feet)	3.2 (10.49)
Range on full charge and flat ground	km (miles)	Up to 56 (35)
The turn-around width	m (ft)	1.8 (5.8)
The maximum safe slope	degrees of slope	10° - Do not exceed the scooter may topple
The maximum climbing ability facing upwards	degrees of slope	10°
Ground clearance	mm (in)	90 (3.5)
Maximum obstacle climbing ability	mm (in)	100 (4)
Maximum safe descendable kerb height	mm (in)	100 (4)

Brochure Request

Do you have a friend or colleague that would be interested in an Electric Mobility product?
If so cut out this coupon and send it to the address shown on the back of the manual.

My Dealer's Company name is:	
☐	Please can I have a free no-obligation home demonstration.
☐	Please send me a brochure of the range of products.
My friend's name is:	
My friend's address is:	
County:	Postcode:
My friend's telephone number is:	

If you are visually impaired, please contact the Company to discuss your requirements. However, you should not drive a vehicle in a public place if you cannot see well enough to ensure your own, and others safety.

Postage will be paid by: Electric Mobility Euro Ltd., FREEPOST (SWBI 1045), Ilminster, Somerset, TA19 9ZA



Dealer Information - Guarantee Card

This section is to be filled out by the Dealer and sent to Electric Mobility Euro Ltd.

Dealer:	
Product Description:	
Serial No.	: Invoice No.:
Customer Name & Address:	
County: Postcode:	
Telephone No.:	
Email address:	
Did you buy on the Internet? ☐ or through a local dealer? ☐ Please tick the relevant box.	
Date received at Dealers:	

Postage will be paid by: Electric Mobility Euro Ltd., FREEPOST (SWBI 1045), Ilminster, Somerset, TA19 9ZA



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Service Log

Notice for the Service Engineer.

Please make sure this part is stamped and dated after each service.

Dealer stamp - 1st Service

Dealer stamp - 2nd Service

Dealer stamp - 3rd Service

Dealer stamp - 4th Service

Dealer stamp - 5th Service

Dealer stamp - 6th Service

Dealer stamp - 7th Service

Dealer stamp - 8th Service

Rascal Frontier & Pioneer Scooters

Manufactured by



Electric Mobility Euro Limited, Canal Way, Ilminster, Somerset TA19 9DL

Telephone: 01460 258100 www.electricmobility.co.uk

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